Isao YOSHIMURA*: Japanese species of *Thyrea***

吉村 庸*: ミタキノリ属地衣の邦産種**

Thyrea was established by Massalongo (1856) based on *Thyrea pulvinata*. Since *Omphalaria* Gir. in Garov. is a later homonym of a fungal genus, *Omphalaria* Fr., *Thyrea* Mass. has been used as a generic name. *Thyrea hondoana* and *Thyrea latissima* have been reported from Japan, but Yoshimura (1968) briefly discussed the difference between *Thyrea* and *Anema* and treated *Thyrea latissima* as a member of *Anema*. In this paper, *Thyrea pulvinata* is reported for the first time from Japan; hence, two species of *Thyrea* are known from Japan.

Thyrea Mass., Flora **39**: 210 (1856).—*Omphalaria* Gir. in Garov., Not. Nat. Civil. Lombardo **1**: 336 (1844), non *Omphalaria* Fr. (1821).

Thyrea pulvinata (Schaer.) Mass., Flora **39**: 211 (1856).—*Parmelia stygia* & *pulvinata* Schaer., Lich. Helvet. Spicil., sect. 11, 544 (1842).—*Collema stygium* var. *pulvinatum* Schaer., Enum. Critic. Lich. Europ., 260 (1842).—*Omphalaria pulvinata* Nyl., Ann. Sci. Nat., Bot., ser. 3, **20**: 320 (1853). Fig. 1.

Thallus coriaceous, ascending to suberect, black, grayish pruinose, pulvinately lobed, marginally wavy to more or less deeply lobed, the clusters of thallus ca. 1 cm across, surface smooth, without isidia, algal cells distributed near both upper and lower surfaces of lobes, medulla composed of hyphae loosely interwoven, rarely hollow in the center, hyphae thin, thread-like, ca. 1 μ wide. Apothecia up to 0.5 mm across, immersed to adnate or borne on the surface of lobes, the disc almost closed, later more or less open, lighter in color, perithecium distinct, hymenium I+blue, paraphyses simple, ascus cylindrical, 8-spored, spores simple, colorless, ellipsoid, 6–7×11–12 μ. Pycnidia not seen. Alga: *Gloeocapsa*, globose, ca. 9 μ in diameter.

Type specimen. Europe, Schaer, Lich. Helvel. Exsic. 435 (not seen).

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** I would like to express my deep thanks to Dr. Y. Asahina for his kind guidance and loan of many valuable specimens. Thanks are extended to Drs. M. E. Hale, U. S. National Museum, S. Kurokawa, National Science Museum, Tokyo, S. Hattori, Hattori Botanical Laboratory, and A. J. Sharp, The University of Tennessee, for their kind help.

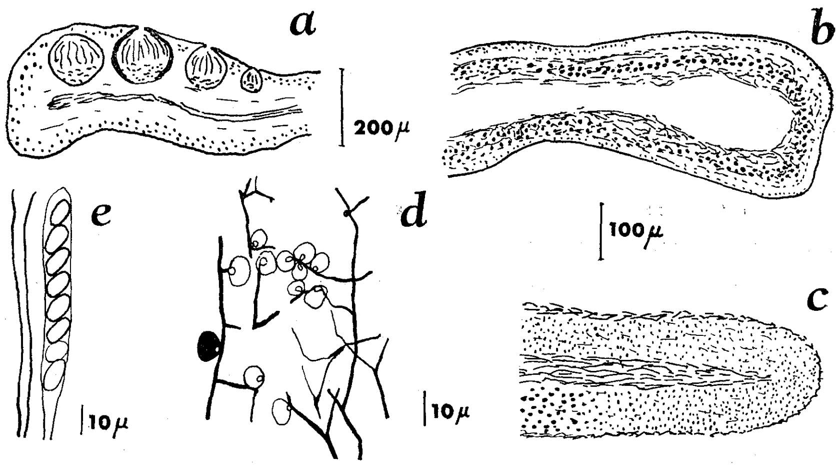

Fig. 1. *Thyrea pulvinata* (Schaer.) Mass. *a*. Diagram of cross-section of a portion of the thallus with apothecia. *b-c*. Diagrams of cross-sections of portions of the thallus. *b*. Hollow heteromerous thallus. *c*. Heteromerous thallus. *d*. Long thin hyphae with *Gloeocapsa*. *e*. Ascus with 8 spores and two paraphyses.

Specimens examined. GERMANY. Baden, 1892, A. Lösch (TNS); ibid. 1898, Lösch (TNS); ibid., Hepp 659 (US). SWITZERLAND. Neuchatel, Hepp 658 (US). Genève, 1873, W. G. Farlow (US). UNITED STATES. New York: Poughkeepsie, 1873, W. R. Gerard (US). Vermont: Willough, 1880, Farlow (US). Colorado: Boulder Co., Steamboat Mt. 5500 ft., 1959, S. Shushan et al., S. 17836 (US). New Mexico: vinicnity of Ute Park, Colfax Co., 2200 to 2900 m alt., 1916, P. C. Standley 13356 (US). JAPAN. Hondo: Prov. Shinano, Todai, 1935, F, Fujikawa 35105 (TNS). Prov. Musashi, Nippara, 1944, I. Sasaki 44949 (TNS). Shikoku: Prov. Sanuki, Shozu Island, Kankakei, 1932, F. Fujikawa 32907a (TNS). Prov. Tosa, Hiraishi near Kochi, 1961, Yoshimura 3802 (NICH); Mt. Yokogura, 1960, Yoshimura 6012 (NICH); Nishiyama near Sakawa, 1960, Yoshimura 2532 (NICH); Otani, Nishigawa-mura, Kami-gun, 1960, Yoshimura 2568 (NICH). Kyushu: Prov. Buzen, Kawara-dake, 1955, H. Ouchi 286 (TNS).

Range. Europe, Africa, North America, Asia (Japan, China, Himalayas).

Habitat. On calcareous rocks.

This species is rather commonly found in calcareous outcrops, and often accompanies *Synalissa symphorea* and other calcareous lichens. This is the first record of this species in Japan. In Asia, Zahlbruckner (1930) reported this species from Yunnan, and Moreau (1951) from Peking. Sato (1962) also reported this species from Langtang-Himal.

Thyrea hondoana Zhalbr., Ann. Mycol. **29**: 79 (1931).

Type specimen. JAPAN. Hondo: Prov. Rikuzen, Mitaki, July 30, 1927, Asahina 557, (isotype, Herb. Asahina 27730, TNS)—duplicates—Lich. Jap. Exsic. 98 (TNS, NICH).

Additional specimens examined. Japan. Hondo: Prov. Rikuzen, Mitaki, on rock (granite) protruding over Hirose-gawa, May 24, 1919, E. Ochiai 218 (TNS). Prov. Shinano, prope Agematsu along the Kisogawa, July 29, 1926, Asahina 26729—Lich. Jap. Exsic. 98 suppl. (TNS, NICH); ibid. Asahina 27730, 119 (TNS); Nezamenotoko along the Kisogawa, Aug. 29, 1926, Asahina (TNS). Prov. Suruga, along the Kisegawa, April 1931, Asahina 3140 (TNS). Prov. Owari, Inuyama, Dota, Aug. 26, 1938, Asahina 3882 (TNS). Shikoku: Prov. Tosa, Iwahara along the Yoshino, on rocky riverbanks, April 4, 1962, Yoshimura 4439 (NICH). CHINA. Hopeh: Pata Ling near Peking, Aug. 5. 1939, G. Shimada 3985 (TNS).

Range. Japan, North China.

Habitat. On non-calcareous rocks of riverbanks.

This species is very similar to *T. pulvinata* in morphological features, but it is different from the latter in having many (mostly 24) globose and small (ca. 5 μ in diameter) spores, and in lacking pruinose lobes. *T. hondoana* grows on siliceous rocks along rivers, while *T. pulvinata* grows on calcareous outcrop. The original description by Zahlbruckner (1931) is very simple, but Asahina (1931) gave a detailed description and figures. Its pycnoconidia as found by Asahina (unpublished data) on specimens from Inuyama (Asahina 3882) are spindle-shaped. This is the first record from China.

Literature Cited

Asahina, Y. 1931. *Thyrea hondoana* and *Thyrea* sp. Jour. Jap. Bot. **7**: 275-277. Massalongo, A. 1856. De nonnullis Collemaceis ex tribu Omphalariearum brevis commentatio. Flora **39**: 209-215. Moreau, F. & Mme. 1951. Lichens de Chine. Rev. Bryol. Lichenol. **20**: 183-199. Sato, M. 1962. Preliminary notes on the lichens of Langtang-Himal in Central Nepal Himalaya collected by Mr. Setuo Hojo in 1959. Misc. Bryol. Lichenol. **2**: 133-137. Yoshimura, I. 1968. Japanese species of *Anema*. (In press). Zahlbruckner, A. 1930. Lichens, in Handel-Mazzetti: Symborae Sinicae, 3. ———. 1931. Neue Flechten 10 Ann. Mycol. **29**: 75-86.

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日本産ミタキノリ属の種類にはミタキノリ *Thyrea hondoana* Zahlbr. と *Thyrea pulvinata* (Schaer.) Mass. がある。ミタキノリは川岸岩上に生育し日本の本州特産と考えられていたが四国でも採集され，中国の北京郊外にも産する。*Thyrea pulvinata* は露出石灰岩上にみられアジアでは中国，ヒマラヤから報告があったが本邦にも広く分布していることがわかった。

○高等植物分布資料 (60) Materials for the distribution of vascular plants in Japan (60)

○チャボガヤ *Torreya nucifera* Sieb. et Zucc. var. *radicans* Nakai　林博士の日本産針葉樹の分類と分布には，分布の北限は新潟県下朝日岳西部の笹原山国有林だろうと記され，矢頭博士の樹木学（針葉樹編）には，会津地方で発見され，裏日本に広く分布していると記され，又岩田・草下共著の邦産松柏類図説には，会津地方で発見され，後新潟県新発田附近，群馬県水上，白馬山麓，岐阜県郡上郡，伊吹山，京大芦生演習林に産する旨が記されている。山形県に関しては結城嘉美著山形県植物誌（昭和9年）に，盃山（山形市），上山，奈平山が記されている。私が調べた当地方では温海嶽，三瀬，荒倉山，水沢一由良間，それに鶴岡市大山の城山国有林等に産する。秋田県の古い文献を調べてみたが出ていないし，近刊の望月陸夫著秋田県男鹿半島の植物，桑山・望月共著秋田県太平山の植物にも出ていない。又秋田・山形県境の三崎山のタブ林中にもなかった。吹浦一湯の浜間は砂丘で，ここは一通り採集して歩るいたが矢張り無い。依って本変種の分布の北限は，上記各地の中で最北にあたる城山国有林となる。私がここで採集したのは昭和25年で随分昔のことである。腊葉は東大理腊葉館に寄贈してある。

（山形大学農学部　森　邦彦）

○ヒロハヌマガヤ *Diarrhena Fauriei* (Hack.) Ohwi　一名オオタツノヒゲは満鮮の産で，日本では古く信州大鹿村の地獄谷で古瀬義氏が採集せられて以来，しばらくそのほかの産地が知られなかったが，二三年前に古瀬義氏が再び信濃国，佐久郡，南相木村で発見，筆者もそのときに同氏の案内で原地をたづねる機会があった。高さ1,500m位の小沢に沿った広けた谷間の南斜面に数ケ所にわたって群落をつくり，花序はタツノヒゲよりも細く，斜面に斜くようにのびていた。沢にそって所々にアヤメ，ヤマトボシガラなどがあり，少し下るとオオマツヨイグサの大群落があって，今を盛りと咲いていた。

○ヤエヤマハギカズラ *Galactia Tashiroi* Maxim. var. *yaeyamensis* Ohwi　日当りのよい海岸の草地や岩地に生える細い多年草で，全体に白短毛がある。茎は細く地をはう様に数本根茎からでて，三小葉に分れたハギのような葉をつけ，腋舌の花梗上に淡紅紫